Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

New Start Project (East Kapolei to Ala Moana Center)

date: 05/04/07

			East Kapolei to Ala Moana Center	
			Preliminary - Not Final (2006$ with Contingency)	Preliminary - Not Final (2006$ with Contingency)
			Sections & Alignments	Sections & Alignments
			Section 1	Section 2
	Description		Saratoga Ave/North-South Rd from UHWO-Makai Station	Fort Weaver Rd to Aloha Stadium
			Alt 5	
			5	1
			At-grade/elevated	At-grade/elevated
10.00	GUIDEWAY & TRACK ELEMENTS			
	10.01 Guideway: At-grade Exclusive Right-of-way		$2,068,368	
	10.04 Guideway: Aerial structure		$98,768,007	$265,825,986
	10.06 Guideway: Underground cut & cover		$0	$19,347,000
	10.08 Guideway: Retained cut or fill		$7,420,200	$9,893,600
	10.09 Track: Direct fixation		$8,750,025	$22,999,950
	10.11 Track: Ballasted		$3,165,612	$753,000
	10.12 Track: Special (switches, turnouts)		$2,969,460	$4,633,684
	SUBTOTAL GUIDEWAY & TRACK		$123,141,672	$323,453,220
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL			
	20.01 At-grade station, stop, shelter, mall, terminal, platform		$3,195,536	$3,195,536
	20.02 Aerial station, stop, shelter, mall, terminal, platform		$11,881,180	$23,762,360
	20.07 Elevators, escalators		$6,504,240	$13,008,480
	SUBTOTAL COST STATIONS, STOPS, TERMINALS, INTERMODAL		$21,580,956	$39,966,376
30.00	YARDS, SHOPS, ADMIN/SUPPORT FACILITIES			
	30.01 Administration Building: Office, sales, storage, revenue counting		$0	$0
	30.03 Heavy Maintenance Facility		$0	$0
	30.04 Storage Building & Yard		"IN 30.03"	"IN 30.03"
	SUBTOTAL COST YARDS, SHOPS, ADMIN/SUPPORT FACILITIES		$0	$0
40.00	SITEWORK & SPECIAL CONDITIONS			
	40.01 Demolition, Clearing, Earthwork[1]		$2,474,018	$7,463,018
	40.02 Site Utilities, Utility Relocation		$12,515,940	$17,431,423
	40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		$237,355	$3,250,635
	40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		$750,000	$2,500,000
	40.06 Site Development: Roads, walks, plazas, parking lots, landscape work		$33,172,332	$97,827,729
	SUBTOTAL COST SITEWORK & SPECIAL CONDITIONS		$49,149,645	$128,472,805
50.00	SYSTEMS			
	50.01 Train control and signals		$6,468,246	$8,466,612
	50.02 Traffic signals and crossing protection		$0	$8,073,364
	50.03 Traction power supply: substations		$6,561,844	$11,483,227
	50.04 Traction power distribution: catenary and third rail		$4,957,065	$8,535,150
	50.05 Communications		$5,761,431	$10,636,626
	50.06 Fare collection system and equipment		$899,136	$1,498,560
	50.07 Central Control		$0	$0
	SUBTOTAL COST SYSTEMS		$24,647,722	$48,693,539
	SUBTOTAL CONSTRUCTION COSTS		$218,519,995	$540,585,940
	CONTINGENCY (WEIGHTED AVERAGE)		$56,227,730	$140,145,693
	SUBTOTAL CONSTRUCTION COSTS WITH CONTINGENCY		$274,747,725	$680,731,633
	FEE/RISK		in items above	in items above
	ADJUSTMENT FOR CASUAL OVERTIME	(2.5% OF DIRECT LABOR)	$1,803,032	$4,467,301
	SUBTOTAL CONSTRUCTION COSTS		$276,550,757	$685,198,934
	HAWAII STATE EXCISE	4.712%	$13,031,072	$32,286,574
	TOTAL CONSTRUCTION COSTS (2006$)		$289,581,829	$717,485,508

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

New Start Project (East Kapolei to Ala Moana Center)

date: 05/04/07

		Description		East Kapolei to Ala Moana Center Preliminary - Not Final (2006$ with Contingency) Sections & Alignments Section 1 Saratoga Ave/North-South Rd from UHWO-Makai Station	East Kapolei to Ala Moana Center Preliminary - Not Final (2006$ with Contingency) Sections & Alignments Section 2 Fort Weaver Rd to Aloha Stadium
60.00	ROW, LAND, EXISTING IMPROVEMENTS				
	60.01	Purchase or lease of real property		$0	$3,320,000
	60.02	Relocation of existing households and businesses		$0	$400,000
		SUBTOTAL COST ROW, LAND, EXISTING IMPROVEMENTS		$0	$3,720,000
		CONTINGENCY & ENGINEERING (40%+10%)	50%	$0	$1,860,000
		TOTAL ROW COSTS		**$0**	**$5,580,000**
70.00	VEHICLES				
	70.01	Light Rail		IN SECTION 6	IN SECTION 6
	70.06	Non-revenue vehicles		IN SECTION 6	IN SECTION 6
	70.07	Spare parts (10% of LRV's)		IN SECTION 6	IN SECTION 6
		SUBTOTAL VEHICLE COST		$0	$0
		CONTINGENCY & ENGINEERING STAFF(10%+14%)	24%	$0	$0
		TOTAL VEHICLE COSTS		**$0**	**$0**
80.00	SOFT COSTS				
	80.01	Preliminary Engineering	3.0%	$8,687,455	$21,524,565
	80.02	Final Design	4.5%	$13,031,182	$32,286,848
	80.03	Project Management for Design and Construction	5.5%	$15,927,001	$39,461,703
	80.04	Construction Administration & Management	10.0%	$28,958,183	$71,748,551
	80.05	Insurance-Professional liability	1.50%	$4,343,727	$10,762,283
	80.06	Legal, Permits, Review Fees by other agencies, cities, etc	1.50%	$4,343,727	$10,762,283
	80.07	Survey, Testing, Investigation, Inspection	0.50%	$1,447,909	$3,587,428
	80.08	Agency: Force Account Work (2% [3,4])	3.5%	$10,135,364	$25,111,993
		SUBTOTAL SOFT COSTS	30%	$86,874,549	$215,245,652
90.00	CONTINGENCY (Project Reserve) (10 thru 80)		6.0%	$22,587,383	$56,298,670
100.00	FINANCE CHARGES			$0	$0
110.00	Total Construction (10+20+30+40+50) (2006$)			$289,581,829	$717,485,508
	OTHER PROJECT COST (60+70+80+90+100) (2006$)			$109,461,931	$277,124,322
	TOTAL PROJECT COST (10+20+30+40+50+60+70+80+90+100) (2006$)			$399,043,760	$994,609,829
	Route foot length			19,269'	35,574'
	Construction Cost per Route Foot (2006$)			**$15,000**	**$20,200**
	Construction Cost per Route Mile (2006$)			**$79,200,000**	**$106,656,000**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

New Start Project (East Kapolei to Ala Moana Center)

date: 05/04/07

			East Kapolei to Ala Moana Center	
			Preliminary - Not Final (2006$ with Contingency)	Preliminary - Not Final (2006$ with Contingency)
			Sections & Alignments	Sections & Alignments
			Section 3	Section 4
	Description		Salt Lake Blvd/Dillingham Blvd	Dillingham Blvd
			section 3 alt 2	
			15	18
			Elevated	Elevated
10.00	GUIDEWAY & TRACK ELEMENTS			
	10.01 Guideway: At-grade Exclusive Right-of-way			
	10.04 Guideway: Aerial structure		$203,521,800	$71,662,950
	10.06 Guideway: Underground cut & cover		$0	$0
	10.08 Guideway: Retained cut or fill		$0	$0
	10.09 Track: Direct fixation		$16,856,100	$5,935,275
	10.11 Track: Ballasted		$0	$0
	10.12 Track: Special (switches, turnouts)		$1,914,822	$2,872,233
	SUBTOTAL GUIDEWAY & TRACK		$222,292,722	$80,470,458
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL			
	20.01 At-grade station, stop, shelter, mall, terminal, platform		$0	$0
	20.02 Aerial station, stop, shelter, mall, terminal, platform		$11,737,180	$17,821,770
	20.07 Elevators, escalators		$6,504,240	$9,756,360
	SUBTOTAL COST STATIONS, STOPS, TERMINALS, INTERMODAL		$18,241,420	$27,578,130
30.00	YARDS, SHOPS, ADMIN/SUPPORT FACILITIES			
	30.01 Administration Building: Office, sales, storage, revenue counting		$0	$0
	30.03 Heavy Maintenance Facility		$0	$0
	30.04 Storage Building & Yard		"IN 30.03"	"IN 30.03"
	SUBTOTAL COST YARDS, SHOPS, ADMIN/SUPPORT FACILITIES		$0	$0
40.00	SITEWORK & SPECIAL CONDITIONS			
	40.01 Demolition, Clearing, Earthwork[1]		$5,169,204	$1,820,151
	40.02 Site Utilities, Utility Relocation		$18,860,936	$72,140,805
	40.03 Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		$154,290	$2,313,240
	40.04 Environmental mitigation, e.g. wetlands, historic/archeologic, parks		$2,500,000	$2,500,000
	40.06 Site Development: Roads, walks, plazas, parking lots, landscape work		$16,974,210	$5,931,451
	SUBTOTAL COST SITEWORK & SPECIAL CONDITIONS		$43,658,640	$84,705,647
50.00	SYSTEMS			
	50.01 Train control and signals		$5,943,336	$2,092,734
	50.02 Traffic signals and crossing protection		$5,151,512	$2,835,328
	50.03 Traction power supply: substations		$8,202,305	$3,280,922
	50.04 Traction power distribution: catenary and third rail		$5,618,700	$1,978,425
	50.05 Communications		$7,466,628	$2,629,107
	50.06 Fare collection system and equipment		$599,424	$899,136
	50.07 Central Control		$0	$0
	SUBTOTAL COST SYSTEMS		$32,981,905	$13,715,652
	SUBTOTAL CONSTRUCTION COSTS		**$317,174,687**	**$206,469,887**
	CONTINGENCY (WEIGHTED AVERAGE)		**$81,962,115**	**$59,494,891**
	SUBTOTAL CONSTRUCTION COSTS WITH CONTINGENCY		**$399,136,801**	**$265,964,779**
	FEE/RISK		in items above	in items above
	ADJUSTMENT FOR CASUAL OVERTIME	(2.5% OF DIRECT LABOR)	**$2,619,335**	**$1,745,394**
	SUBTOTAL CONSTRUCTION COSTS		**$401,756,137**	**$267,710,173**
	HAWAII STATE EXCISE	4.712%	**$18,930,749**	**$12,614,503**
	TOTAL CONSTRUCTION COSTS (2006$)		**$420,686,886**	**$280,324,676**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

New Start Project (East Kapolei to Ala Moana Center)

date: 05/04/07

				East Kapolei to Ala Moana Center	
				Preliminary - Not Final (2006$ with Contingency)	Preliminary - Not Final (2006$ with Contingency)
				Sections & Alignments	Sections & Alignments
				Section 3	Section 4
	Description			Salt Lake Blvd/Dillingham Blvd	Dillingham Blvd
60.00	ROW, LAND, EXISTING IMPROVEMENTS				
	60.01	Purchase or lease of real property		$4,720,000	$6,540,000
	60.02	Relocation of existing households and businesses		$0	$0
		SUBTOTAL COST ROW, LAND, EXISTING IMPROVEMENTS		$4,720,000	$6,540,000
		CONTINGENCY & ENGINEERING (40%+10%)	50%	$2,360,000	$3,270,000
		TOTAL ROW COSTS		**$7,080,000**	**$9,810,000**
70.00	VEHICLES				
	70.01	Light Rail		IN SECTION 6	IN SECTION 6
	70.06	Non-revenue vehicles		IN SECTION 6	IN SECTION 6
	70.07	Spare parts (10% of LRV's)		IN SECTION 6	IN SECTION 6
		SUBTOTAL VEHICLE COST		$0	$0
		CONTINGENCY & ENGINEERING STAFF(10%+14%)	24%	$0	$0
		TOTAL VEHICLE COSTS		**$0**	**$0**
80.00	SOFT COSTS				
	80.01	Preliminary Engineering	3.0%	$12,620,607	$8,409,740
	80.02	Final Design	4.5%	$18,930,910	$12,614,610
	80.03	Project Management for Design and Construction	5.5%	$23,137,779	$15,417,857
	80.04	Construction Administration & Management	10.0%	$42,068,689	$28,032,468
	80.05	Insurance-Professional liability	1.50%	$6,310,303	$4,204,870
	80.06	Legal, Permits, Review Fees by other agencies, cities, etc	1.50%	$6,310,303	$4,204,870
	80.07	Survey, Testing, Investigation, Inspection	0.50%	$2,103,434	$1,401,623
	80.08	Agency: Force Account Work (2% [3,4])	3.5%	$14,724,041	$9,811,364
		SUBTOTAL SOFT COSTS	30%	$126,206,066	$84,097,403
90.00	CONTINGENCY (Project Reserve) (10 thru 80)		6.0%	$33,238,377	$22,453,925
100.00	FINANCE CHARGES			$0	$0
110.00	Total Construction (10+20+30+40+50) (2006$)			$420,686,886	$280,324,676
	OTHER PROJECT COST (60+70+80+90+100) (2006$)			$166,524,443	$116,361,328
	TOTAL PROJECT COST (10+20+30+40+50+60+70+80+90+100) (2006$)			$587,211,328	$396,686,004
	Route foot length			24,972'	8,793'
	Construction Cost per Route Foot (2006$)			**$16,800**	**$31,900**
	Construction Cost per Route Mile (2006$)			**$88,704,000**	**$168,432,000**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

New Start Project (East Kapolei to Ala Moana Center)

date: 05/04/07

				East Kapolei to Ala Moana Center	
				Preliminary - Not Final (2006$ with Contingency)	Preliminary - Not Final (2006$ with Contingency)
				Sections & Alignments	Sections & Alignments
				Section 5	Section 6
	Description			Dillingham/Nimitz Hwy/Halekauwila St/Kapiolani Blvd to Ala Moana Sta	Systemwide
					Alt 11
				25	26
				Elevated	Elevated
10.00	GUIDEWAY & TRACK ELEMENTS				
	10.01	Guideway: At-grade Exclusive Right-of-way			
	10.04	Guideway: Aerial structure		$118,816,510	$0
	10.06	Guideway: Underground cut & cover		$0	$0
	10.08	Guideway: Retained cut or fill		$0	$0
	10.09	Track: Direct fixation		$9,803,700	$0
	10.11	Track: Ballasted		$0	$0
	10.12	Track: Special (switches, turnouts)		$5,793,564	$0
		SUBTOTAL GUIDEWAY & TRACK		$134,413,774	$0
20.00	STATIONS, STOPS, TERMINALS, INTERMODAL				
	20.01	At-grade station, stop, shelter, mall, terminal, platform		$0	$0
	20.02	Aerial station, stop, shelter, mall, terminal, platform		$36,696,688	$0
	20.07	Elevators, escalators		$17,945,931	$0
		SUBTOTAL COST STATIONS, STOPS, TERMINALS, INTERMODAL		$54,642,619	$0
30.00	YARDS, SHOPS, ADMIN/SUPPORT FACILITIES				
	30.01	Administration Building: Office, sales, storage, revenue counting		$0	$14,758,888
	30.03	Heavy Maintenance Facility		$0	$66,456,265
	30.04	Storage Building & Yard		"IN 30.03"	"IN 30.03"
		SUBTOTAL COST YARDS, SHOPS, ADMIN/SUPPORT FACILITIES		$0	$81,215,153
40.00	SITEWORK & SPECIAL CONDITIONS				
	40.01	Demolition, Clearing, Earthwork[1]		$3,006,468	$0
	40.02	Site Utilities, Utility Relocation		$126,787,082	$0
	40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments		$0	$0
	40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks		$750,000	$0
	40.06	Site Development: Roads, walks, plazas, parking lots, landscape work		$5,406,413	$0
		SUBTOTAL COST SITEWORK & SPECIAL CONDITIONS		$135,949,963	$0
50.00	SYSTEMS				
	50.01	Train control and signals		$3,456,712	$0
	50.02	Traffic signals and crossing protection		$6,336,226	$0
	50.03	Traction power supply: substations		$4,921,383	$0
	50.04	Traction power distribution: catenary and third rail		$3,267,900	$0
	50.05	Communications		$4,342,676	$0
	50.06	Fare collection system and equipment		$1,798,272	$0
	50.07	Central Control		$0	$8,529,933
		SUBTOTAL COST SYSTEMS		$24,123,169	$8,529,933
		SUBTOTAL CONSTRUCTION COSTS		**$349,129,524**	**$89,745,086**
		CONTINGENCY (WEIGHTED AVERAGE)		**$100,336,736**	**$22,436,272**
		SUBTOTAL CONSTRUCTION COSTS WITH CONTINGENCY		**$449,466,260**	**$112,181,358**
		FEE/RISK		in items above	in items above
		ADJUSTMENT FOR CASUAL OVERTIME	(2.5% OF DIRECT LABOR)	**$2,949,622**	**$736,190**
		SUBTOTAL CONSTRUCTION COSTS		**$452,415,883**	**$112,917,548**
		HAWAII STATE EXCISE	4.712%	**$21,317,836**	**$5,320,675**
		TOTAL CONSTRUCTION COSTS (2006$)		**$473,733,719**	**$118,238,223**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

New Start Project (East Kapolei to Ala Moana Center)

date: 05/04/07

		Description		East Kapolei to Ala Moana Center Preliminary - Not Final (2006$ with Contingency) Sections & Alignments Section 5 Dillingham/Nimitz Hwy/Halekauwila St/Kapiolani Blvd to Ala Moana Sta	East Kapolei to Ala Moana Center Preliminary - Not Final (2006$ with Contingency) Sections & Alignments Section 6 Systemwide
60.00	ROW, LAND, EXISTING IMPROVEMENTS				
	60.01	Purchase or lease of real property		$31,800,000	$0
	60.02	Relocation of existing households and businesses		$1,300,000	$0
		SUBTOTAL COST ROW, LAND, EXISTING IMPROVEMENTS		$33,100,000	$0
		CONTINGENCY & ENGINEERING (40%+10%)	50%	$16,550,000	$0
		TOTAL ROW COSTS		**$49,650,000**	**$0**
70.00	VEHICLES				
	70.01	Light Rail		IN SECTION 6	$162,804,312
	70.06	Non-revenue vehicles		IN SECTION 6	$4,203,149
	70.07	Spare parts (10% of LRV's)		IN SECTION 6	$16,280,418
		SUBTOTAL VEHICLE COST		$0	$183,287,879
		CONTINGENCY & ENGINEERING STAFF(10%+14%)	24%	$0	$43,989,091
		TOTAL VEHICLE COSTS		**$0**	**$227,276,970**
80.00	SOFT COSTS				
	80.01	Preliminary Engineering	3.0%	$14,212,012	$3,547,147
	80.02	Final Design	4.5%	$21,318,017	$5,320,720
	80.03	Project Management for Design and Construction	5.5%	$26,055,355	$6,503,102
	80.04	Construction Administration & Management	10.0%	$47,373,372	$11,823,822
	80.05	Insurance-Professional liability	1.50%	$7,106,006	$1,773,573
	80.06	Legal, Permits, Review Fees by other agencies, cities, etc	1.50%	$7,106,006	$1,773,573
	80.07	Survey, Testing, Investigation, Inspection	0.50%	$2,368,669	$591,191
	80.08	Agency: Force Account Work (2% [3,4])	3.5%	$16,580,680	$4,138,338
		SUBTOTAL SOFT COSTS	30%	$142,120,116	$35,471,467
90.00	CONTINGENCY (Project Reserve) (10 thru 80)		6.0%	$39,930,230	$22,859,200
100.00	FINANCE CHARGES			$0	$0
110.00	Total Construction (10+20+30+40+50) (2006$)			$473,733,719	$118,238,223
	OTHER PROJECT COST (60+70+80+90+100) (2006$)			$231,700,346	$285,607,636
	TOTAL PROJECT COST (10+20+30+40+50+60+70+80+90+100) (2006$)			$705,434,065	$403,845,859
	Route foot length			14,524'	
	Construction Cost per Route Foot (2006$)			**$32,600**	
	Construction Cost per Route Mile (2006$)			**$172,128,000**	

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

Pricing Sheet
Guideway & Trackwork
New Start Project (East Kapolei to Ala Moana Center)

		DESCRIPTION	COST ID	QTY	UNIT	Saratoga Ave/North-South Rd from UHWO-Makai Station Section 1 Alt 5a		Fort Weaver Rd to Aloha Stadium Section 2 Alt 1	
1	2		3	4	5	64	65	22	23
10.00 GUIDEWAY & TRACK ELEMENTS (route miles)									
		Guideway: At-grade Exclusive							
csc10.01-1		Single At-Grade Ballasted Trackbed - Open	1	RF	$260	-	$0	-	$0
csc10.01-2		Double At-Grade Ballasted Trackbed - Open	1	RF	$328	6,306	$2,068,368	-	$0
csc10.01-5		Single At-Grade Guideway for Paved Track	1	RF	**NOT USED	-		-	
csc10.01-6		Double At-Grade Guideway for Paved Track	1	RF	**NOT USED	-		-	
	10.01	**Guideway: At-grade Exclusive**		**RF**			**$2,068,368**		**$0**
	10.02	**Guideway: At-grade semi-exclusive (allows cross-traffic) NOT USED**********					**NOT USED**		**NOT USED**
		Guideway: At-grade in mixed traffic							
csc10.01-4		Double At-Grade Guideway for Paved Track	1	RF	$365	0	$0	-	$0
	10.03	**Guideway: At-grade in mixed traffic**		**RF**			**$0**		**$0**
		Guideway: Aerial structure							
csc10.04-1		Segmental Aerial Structure (T/R +25 Ft.) Column (6 ft Dia)	1	RF	$7,989	12,363	$98,768,007	33,274	$265,825,986
csc10.04-2a		Standard Aerial Dual Structure (T/R +30 Ft.) CIP	1	RF	$5,993	-	$0	-	$0
csc10.04-2		Segmental Aerial Structure (T/R +30 Ft.) Column (6 ft Dia)	1	RF	$8,086	-	$0	-	$0
csc10.04-3		Segmental Aerial Structure (T/R +40 Ft.) Column (6 ft Dia)	1	RF	$8,150	-	$0	-	$0
csc10.04-4		Segmental Aerial Structure (T/R +50 Ft.) Column (8 ft Dia)	1	RF	$8,452	-	$0	-	$0
csc10.04-5		Segmental Aerial Structure (T/R +60 Ft.) Column (8 ft dia)	1	RF	$8,709	-	$0	-	$0
csc10.04-6		Standard Aerial Dual Structure (T/R +30 Ft.) Cast - in Place	1	RF	$5,793	-	$0	-	$0
csc10.04-6X		FACTOR FOR DOWNTOWN AERIAL STRUCTURE	1	%	30%		$0		$0
	10.04	**Guideway: Aerial structure**		**RF**		**12,363**	**$98,768,007**	**$33,274**	**$265,825,986**
	10.05	**Guideway: Built-up fill not used**********							
		Guideway: Underground cut & cover							
csc10.06-1		Cut & Cover, Tunnel (TBM) , Portal, U Wall (Hotel St / Kawaiano / K	1	RF	$34,090	-	$0	-	$0
csc10.06-2		U-Wall Retained Cut Dual Track Portal (Avg. Depth 25 ft)	1	RF	$12,898	-	$0	1,500	$19,347,000
	10.06	**Guideway: Underground cut & cover**		**RF**			**$0**		**$19,347,000**
		Guideway: Underground tunnel							
csc10.07-1		Tunnel, Portal and U-Wall (Hotel Waimanu / Kapiolani Blvd)	1	RF	$31,308	-	$0	-	$0
csc10.07-2		Tunnel, Portal and U-Wall (North King \ Bertania St \ S King St)	1	RF	$25,129	-	$0	-	$0
csc10.07-3		Tunnel, Portal and U-Wall (Dillingham \ Bertania St \ S King St)	1	RF	$25,129	-	$0	-	$0
csc10.07-4		Tunnel, Portal and U-Wall (King St Option 1 sta 1315+55 to 1408+9	1	RF	$26,088	-	$0	-	$0
csc10.07-5		Tunnel, Portal and U-Wall (King St Option 2 sta 1348+50 to 1408+9	1	RF	$27,920	-	$0	-	$0
	10.07	**Guideway: Underground tunnel**		-			**$0**		**$0**
		Guideway: Retained cut or fill							
csc10.08-1		Abutment Double At-Grade (Avg. D. T/R +10 Ft.) 100 ft length	1	RF	$12,367	600	$7,420,200	800	$9,893,600
csc10.08-2		Abutment Single At-Grade (Avg. D. T/R +10 Ft.)	1	RF	$6,162	-	$0	-	$0
	10.08	**Guideway: Retained cut or fill**		**RF**			**$7,420,200**		**$9,893,600**
		Track: Direct fixation							
csc10.09-1		Direct Fixation Track - Single	1	RF	$435	-	$0	-	$0
csc10.09-2		Direct Fixation Dual Track	1	RF	$675	12,963	$8,750,025	34,074	$22,999,950
	10.09	**Track: Direct fixation**		**RF**			**$8,750,025**		**$22,999,950**
		Track: Embedded/Paved							
csc10.10-1		Paved Track (In Street) - Single	1	RF	$667	-	$0	-	$0
csc10.10-2		Paved Track (In Street) - DUAL	1	RF	$1,250	-	$0	-	$0
	10.10	**Track: Embedded/Paved**		**RF**			**$0**		**$0**
		Track: Ballasted							
csc10.11-1		Ballasted Track (Open) - Single	1	RF	$247	-	$0	-	$0
csc10.11-2		Ballasted Track (Open) - Double	1	RF	$502	6,306	$3,165,612	1,500	$753,000
	10.11	**Track: Ballasted**		**RF**			**$3,165,612**		**$753,000**
		Track: Special (switches, turnouts)							
csc10.12-1		Double Crossover DF (No. 10)	1	EA	$957,411	2	$1,914,822	4	$3,829,644
csc10.12-2		Double Crossover Ballasted (No. 10)	1	EA	$804,040	1	$804,040	1	$804,040
csc10.12-3		No. 6 Turnout - DF	1	EA	$282,314		$0		$0
csc10.12-4		No. 5 Turnout - DF	1	EA	$135,258		$0		$0
csc10.12-5		Permanent Terminal, Direct Fixation	1	EA	$24,549	2	$49,098		$0
csc10.12-6		Grade Crossing Panels (Dual Track)	1	EA	$650	310	$201,500	0	$0
	10.12	**Track: Special (switches, turnouts)**		**LS**			**$2,969,460**		**$4,633,684**
		Track: Vibration and noise dampening							
csc10.13-1		Track Vibration and Noise Dampening	1	RF	$1,074	$ -	$0		$0
	10.13	**Vibration and noise dampening**		**RF**			**$0**		**$0**
Total Guideways							**$123,141,672**		**$323,453,220**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis
Pricing Sheet
Guideway & Trackwork
New Start Project (East Kapolei to Ala Moana Center)

			COST ID	QTY	UNIT	Salt Lake Blvd/Dillingham Blvd Section 3 Alt 2		Dillingham Blvd Section 4 Alt 3	
1		2	3	4	5	26	27	40	41
10.00 GUIDEWAY & TRACK ELEMENTS (route miles)									
		Guideway: At-grade Exclusive							
csc10.01-1		Single At-Grade Ballasted Trackbed - Open	1	RF	$260	-	$0	-	$0
csc10.01-2		Double At-Grade Ballasted Trackbed - Open	1	RF	$328	-	$0	-	$0
csc10.01-5		Single At-Grade Guideway for Paved Track	1	RF	**NOT USED	-		-	
csc10.01-6		Double At-Grade Guideway for Paved Track	1	RF	**NOT USED	-		-	
	10.01	**Guideway: At-grade Exclusive**		**RF**			**$0**		**$0**
	10.02	**Guideway: At-grade semi-exclusive (allows cross-traffic) NOT USED**********					**NOT USED**		**NOT USED**
		Guideway: At-grade in mixed traffic							
csc10.01-4		Double At-Grade Guideway for Paved Track	1	RF	$365	-	$0	0	$0
	10.03	**Guideway: At-grade in mixed traffic**		**RF**			**$0**		**$0**
		Guideway: Aerial structure							
csc10.04-1		Segmental Aerial Structure (T/R +25 Ft.) Column (6 ft Dia)	1	RF	$7,989	-	$0	-	$0
csc10.04-2a		Standard Aerial Dual Structure (T/R +30 Ft.) CIP	1	RF	$5,993	-	$0	-	$0
csc10.04-2		Segmental Aerial Structure (T/R +30 Ft.) Column (6 ft Dia)	1	RF	$8,086	-	$0	-	$0
csc10.04-3		Segmental Aerial Structure (T/R +40 Ft.) Column (6 ft Dia)	1	RF	$8,150	24,972	$203,521,800	8,793	$71,662,950
csc10.04-4		Segmental Aerial Structure (T/R +50 Ft.) Column (8 ft Dia)	1	RF	$8,452	-	$0	-	$0
csc10.04-5		Segmental Aerial Structure (T/R +60 Ft.) Column (8 ft dia)	1	RF	$8,709	-	$0	-	$0
csc10.04-6		Standard Aerial Dual Structure (T/R +30 Ft.) Cast - in Place	1	RF	$5,793	-	$0	-	$0
csc10.04-6X		FACTOR FOR DOWNTOWN AERIAL STRUCTURE	1	%	30%		$0		$0
	10.04	**Guideway: Aerial structure**		**RF**		**$24,972**	**$203,521,800**	**$8,793**	**$71,662,950**
	10.05	**Guideway: Built-up fill not used**********							
		Guideway: Underground cut & cover							
csc10.06-1		Cut & Cover, Tunnel (TBM) , Portal, U Wall (Hotel St / Kawaiano / K	1	RF	$34,090	-	$0	-	$0
csc10.06-2		U-Wall Retained Cut Dual Track Portal (Avg. Depth 25 ft)	1	RF	$12,898	-	$0	-	$0
	10.06	**Guideway: Underground cut & cover**		**RF**			**$0**		**$0**
		Guideway: Underground tunnel							
csc10.07-1		Tunnel, Portal and U-Wall (Hotel Waimanu / Kapiolani Blvd)	1	RF	$31,308	-	$0	-	$0
csc10.07-2		Tunnel, Portal and U-Wall (North King \ Bertania St \ S King St)	1	RF	$25,129	-	$0	-	$0
csc10.07-3		Tunnel, Portal and U-Wall (Dillingham \ Bertania St \ S King St)	1	RF	$25,129	-	$0	-	$0
csc10.07-4		Tunnel, Portal and U-Wall (King St Option 1 sta 1315+55 to 1408+9	1	RF	$26,088	-	$0	-	$0
csc10.07-5		Tunnel, Portal and U-Wall (King St Option 2 sta 1348+50 to 1408+9	1	RF	$27,920	-	$0	-	$0
	10.07	**Guideway: Underground tunnel**		**-**			**$0**		**$0**
		Guideway: Retained cut or fill							
csc10.08-1		Abutment Double At-Grade (Avg. D. T/R +10 Ft.) 100 ft length	1	RF	$12,367	-	$0	-	$0
csc10.08-2		Abutment Single At-Grade (Avg. D. T/R +10 Ft.)	1	RF	$6,162	-	$0	-	$0
	10.08	**Guideway: Retained cut or fill**		**RF**			**$0**		**$0**
		Track: Direct fixation							
csc10.09-1		Direct Fixation Track - Single	1	RF	$435	-	$0	-	$0
csc10.09-2		Direct Fixation Dual Track	1	RF	$675	24,972	$16,856,100	8,793	$5,935,275
	10.09	**Track: Direct fixation**		**RF**			**$16,856,100**		**$5,935,275**
		Track: Embedded/Paved							
csc10.10-1		Paved Track (In Street) - Single	1	RF	$667	-	$0	-	$0
csc10.10-2		Paved Track (In Street) - DUAL	1	RF	$1,250	-	$0	-	$0
	10.10	**Track: Embedded/Paved**		**RF**			**$0**		**$0**
		Track: Ballasted							
csc10.11-1		Ballasted Track (Open) - Single	1	RF	$247	-	$0	-	$0
csc10.11-2		Ballasted Track (Open) - Double	1	RF	$502	-	$0	-	$0
	10.11	**Track: Ballasted**		**RF**			**$0**		**$0**
		Track: Special (switches, turnouts)							
csc10.12-1		Double Crossover DF (No. 10)	1	EA	$957,411	2	$1,914,822	3	$2,872,233
csc10.12-2		Double Crossover Ballasted (No. 10)	1	EA	$804,040	-	$0	-	$0
csc10.12-3		No. 6 Turnout - DF	1	EA	$282,314		$0		$0
csc10.12-4		No. 5 Turnout - DF	1	EA	$135,258		$0		$0
csc10.12-5		Permanent Terminal, Direct Fixation	1	EA	$24,549		$0		$0
csc10.12-6		Grade Crossing Panels (Dual Track)	1	EA	$650	0	$0	0	$0
	10.12	**Track: Special (switches, turnouts)**		**LS**			**$1,914,822**		**$2,872,233**
		Track: Vibration and noise dampening							
csc10.13-1		Track Vibration and Noise Dampening	1	RF	$1,074	$ -	$0	$ -	$0
	10.13	**Vibration and noise dampening**		**RF**			**$0**		**$0**
Total Guideways							**$222,292,722**		**$80,470,458**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

Pricing Sheet
Guideway & Trackwork
New Start Project (East Kapolei to Ala Moana Center)

			COST ID	QTY	UNIT	Dillingham/Nimitz Hwy/Halekauwila St/Kapiolani Blvd to Ala Moana Sta Section 1 Alt 5a	
1		2	3	4	5	78	79
10.00 GUIDEWAY & TRACK ELEMENTS (route miles)							
		Guideway: At-grade Exclusive					
csc10.01-1		Single At-Grade Ballasted Trackbed - Open	1	RF	$260	-	$0
csc10.01-2		Double At-Grade Ballasted Trackbed - Open	1	RF	$328	-	$0
csc10.01-5		Single At-Grade Guideway for Paved Track	1	RF	**NOT USED	-	
csc10.01-6		Double At-Grade Guideway for Paved Track	1	RF	**NOT USED	-	
	10.01	**Guideway: At-grade Exclusive**		**RF**			**$0**
	10.02	**Guideway: At-grade semi-exclusive (allows cross-traffic) NOT USED**********|				**NOT USED**	
		Guideway: At-grade in mixed traffic					
csc10.01-4		Double At-Grade Guideway for Paved Track	1	RF	$365	-	$0
	10.03	**Guideway: At-grade in mixed traffic**		**RF**			**$0**
		Guideway: Aerial structure					
csc10.04-1		Segmental Aerial Structure (T/R +25 Ft.) Column (6 ft Dia)	1	RF	$7,989	-	$0
csc10.04-2a		Standard Aerial Dual Structure (T/R +30 Ft.) CIP	1	RF	$5,993	12,505	$74,942,465
csc10.04-2		Segmental Aerial Structure (T/R +30 Ft.) Column (6 ft Dia)	1	RF	$8,086	-	$0
csc10.04-3		Segmental Aerial Structure (T/R +40 Ft.) Column (6 ft Dia)	1	RF	$8,150	2,019	$16,454,850
csc10.04-4		Segmental Aerial Structure (T/R +50 Ft.) Column (8 ft Dia)	1	RF	$8,452	-	$0
csc10.04-5		Segmental Aerial Structure (T/R +60 Ft.) Column (8 ft dia)	1	RF	$8,709	-	$0
csc10.04-6		Standard Aerial Dual Structure (T/R +30 Ft.) Cast - in Place	1	RF	$5,793	-	$0
csc10.04-6X		FACTOR FOR DOWNTOWN AERIAL STRUCTURE	1	%	30%	1	$27,419,195
	10.04	**Guideway: Aerial structure**		**RF**		**14,524**	**$118,816,510**
	10.05	**Guideway: Built-up fill not used**********					
		Guideway: Underground cut & cover					
csc10.06-1		Cut & Cover, Tunnel (TBM) , Portal, U Wall (Hotel St / Kawaiano / K	1	RF	$34,090	-	$0
csc10.06-2		U-Wall Retained Cut Dual Track Portal (Avg. Depth 25 ft)	1	RF	$12,898	-	$0
	10.06	**Guideway: Underground cut & cover**		**RF**			**$0**
		Guideway: Underground tunnel					
csc10.07-1		Tunnel, Portal and U-Wall (Hotel Waimanu / Kapiolani Blvd)	1	RF	$31,308	-	$0
csc10.07-2		Tunnel, Portal and U-Wall (North King \ Bertania St \ S King St)	1	RF	$25,129	-	$0
csc10.07-3		Tunnel, Portal and U-Wall (Dillingham \ Bertania St \ S King St)	1	RF	$25,129	-	$0
csc10.07-4		Tunnel, Portal and U-Wall (King St Option 1 sta 1315+55 to 1408+9	1	RF	$26,088	-	$0
csc10.07-5		Tunnel, Portal and U-Wall (King St Option 2 sta 1348+50 to 1408+9	1	RF	$27,920	-	$0
	10.07	**Guideway: Underground tunnel**		**-**			**$0**
		Guideway: Retained cut or fill					
csc10.08-1		Abutment Double At-Grade (Avg. D. T/R +10 Ft.) 100 ft length	1	RF	$12,367	-	$0
csc10.08-2		Abutment Single At-Grade (Avg. D. T/R +10 Ft.)	1	RF	$6,162	-	$0
	10.08	**Guideway: Retained cut or fill**		**RF**			**$0**
		Track: Direct fixation					
csc10.09-1		Direct Fixation Track - Single	1	RF	$435	-	$0
csc10.09-2		Direct Fixation Dual Track	1	RF	$675	14,524	$9,803,700
	10.09	**Track: Direct fixation**		**RF**			**$9,803,700**
		Track: Embedded/Paved					
csc10.10-1		Paved Track (In Street) - Single	1	RF	$667	-	$0
csc10.10-2		Paved Track (In Street) - DUAL	1	RF	$1,250	-	$0
	10.10	**Track: Embedded/Paved**		**RF**			**$0**
		Track: Ballasted					
csc10.11-1		Ballasted Track (Open) - Single	1	RF	$247	-	$0
csc10.11-2		Ballasted Track (Open) - Double	1	RF	$502	-	$0
	10.11	**Track: Ballasted**		**RF**			**$0**
		Track: Special (switches, turnouts)					
csc10.12-1		Double Crossover DF (No. 10)	1	EA	$957,411	6	$5,744,466
csc10.12-2		Double Crossover Ballasted (No. 10)	1	EA	$804,040	-	$0
csc10.12-3		No. 6 Turnout - DF	1	EA	$282,314		$0
csc10.12-4		No. 5 Turnout - DF	1	EA	$135,258		$0
csc10.12-5		Permanent Terminal, Direct Fixation	1	EA	$24,549	2	$49,098
csc10.12-6		Grade Crossing Panels (Dual Track)	1	EA	$650	0	$0
	10.12	**Track: Special (switches, turnouts)**		**LS**			**$5,793,564**
		Track: Vibration and noise dampening					
csc10.13-1		Track Vibration and Noise Dampening	1	RF	$1,074	$ -	$0
	10.13	**Vibration and noise dampening**		**RF**			**$0**
Total Guideways							**$134,413,774**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis
Pricing Sheet
Station & Stops

			COST ID	QTY	UNIT	SECTION 1		SECTION 2		SECTION 3		SECTION 4		SECTION 5	
		DESCRIPTION				Saratoga Ave/North-South Rd from UHWO-Makai Station		Fort Weaver Rd to Aloha Stadium		Salt Lake Blvd/Dillingham Blvd		Dillingham Blvd		Dillingham/Nimitz Hwy/Halekauwila St/Kapiolani Blvd to Ala Moana Sta	
						Section 1 Alt 5		Section 2 Alt 1						Section 1 Alt 5	
20.00		**STATIONS & STOPS**													
		AT GRADE STATIONS													
csc20.01-1		At-Grade Station - Split Side Platform (270 Ft. L.)	1	LS	$3,195,536	1	$3,195,536	1	$3,195,536	-	$0	-	$0	-	$0
	20.01	**AT GRADE STATIONS**		RF			**$3,195,536**		**$3,195,536**		**$0**		**$0**		**$0**
		AERIAL STATIONS													
csc20.02-1		Aerial Station - SidePlatforms. Major (270 Ft. L.) Mezzanine	1	LS	$5,940,590	2	$11,881,180	4	$23,762,360	1	$5,940,590	3	$17,821,770	2	$11,881,180
csc20.02-2		Aerial Station - SidePlatforms. Major (270 Ft. L.) No Mezzanine	1	LS	$5,796,590	-	$0	-	$0	1	$5,796,590	-	$0	3	$17,389,770
csc20.02-3		Aerial Station - Stacked SidePlatforms. Major (270 Ft. L.) No Mezzanine	1	LS	$6,140,810	-	$0	-	$0	-	$0	-	$0	-	$0
csc20.02-4		Aerial Station - Stacked SidePlatforms. Major (270 Ft. L.) Mezzanine	1	LS	$6,284,810	-	$0	-	$0	-	$0	-	$0	-	$0
csc20.02-5		Aerial Station - Center Platforms. Major (270 Ft. L.) Mezzanine	1	LS	$7,425,738	-	$0	-	$0	-	$0	-	$0	1	$7,425,738
	20.02	**AERIAL STATIONS**		RF			**$11,881,180**		**$23,762,360**		**$11,737,180**		**$17,821,770**		**$36,696,688**
		UNDERGROUND STATIONS													
csc20.03-1		Underground Station with Center Platform and Mezzanine	1	LS	$85,172,231	-	$0	-	$0	-	$0	-	$0	-	$0
csc20.03-2		Underground Station with Center Platform without Mezzanine	1	LS	$74,005,063	-	$0	-	$0	-	$0	-	$0	-	$0
	20.03	**UNDERGROUND STATIONS**		RF			**$0**		**$0**		**$0**		**$0**		**$0**
	20.04	**OTHER STATIONS & PEDESTRIAN TUNNELS**				**NOT USED**		**NOT USED**		**NOT USED**		**NOT USED**		**NOT USED**	
	20.05	**JOINT DEVELOPMENT**				**NOT USED**		**NOT USED**		**NOT USED**		**NOT USED**		**NOT USED**	
	20.06	**AUTOMOBILE PARKING MULTISTORY STRUCTURE**				**NOT USED**		**NOT USED**		**NOT USED**		**NOT USED**		**NOT USED**	
		ELEVATORS & ESCALATORS													
csc20.07-1		ELEVATORS (40 ft Rise)	1	EA	$454,508	4	$1,818,032	8	$3,636,064	4	$1,818,032	6	$2,727,048	10	$4,545,080
csc20.07-2		ELEVATORS (50 ft Rise)	1	EA	$513,779	-	$0	-	$0	-	$0	-	$0	1	$513,779
csc20.07-3		ELEVATORS-RAPID RISE (70 ft Rise)	1	EA	$645,336	-	$0	-	$0	-	$0	-	$0	-	$0
csc20.07-4		ESCALATORS (15 ft Rise)	1	EA	$523,954	-	$0	-	$0	-	$0	-	$0	-	$0
csc20.07-5		ESCALATORS (30 ft Rise)	1	EA	$585,776	8	$4,686,208	16	$9,372,416	8	$4,686,208	12	$7,029,312	22	$12,887,072
csc20.07-6		ESCALATORS (60 ft Rise)	1	EA	$795,302										
	20.07	**ELEVATORS & ESCALATORS**		RF			**$6,504,240**		**$13,008,480**		**$6,504,240**		**$9,756,360**		**$17,945,931**
		Total STATIONS & STOPS					**$21,580,956**		**$39,966,376**		**$18,241,420**		**$27,578,130**		**$54,642,619**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

Pricing Sheet
YARDS, SHOPS, ADMIN/SUPPORT FACILITIES

		DESCRIPTION	COST ID	QTY	UNIT	Systemwide	
1	2		3	4	5	80	81
30.00 YARDS, SHOPS, ADMIN/SUPPORT FACILITIES (20 ACRES)							
		ADMINISTRATION BUILDING: OFFICE, SALES, STORAGE, REVENUE COUNTING					
csc30.01-1		Administration Building & Site Facilities	1	LS	$14,758,888	1	$14,758,888
	30.01	**ADMINISTRATION BUILDING: OFFICE, SALES, STORAGE, REVENUE COUNTING**		**RF**			$14,758,888
		HEAVY MAINTENANCE FACILITY					
csc30.02-1		Storage Track & Running Repair Maintenance Bldg	1	LS	$0		
csc30.02-2		Heavy Maintenance Facility and Yard	1	LS	$66,456,265	1	$66,456,265
	30.03	**HEAVY MAINTENANCE FACILITY**		**RF**			$66,456,265
	30.02	**LIGHT MAINTENANCE FACILITY NOT USED**********					**NOT USED**
	30.04	**STORAGE BUILDING & YARD**					"IN 30.02"
	30.05	**MAINTENANCE OF WAY BUILDING & YARD NOT USED**********					**NOT USED**
Total YARDS, SHOPS ADMINISTRATION SUPPORT FACILITIES							$81,215,153

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

Pricing Sheet
Sitework & Special Conditions

COST ID	FTA Code	DESCRIPTION	QTY	UNIT	UNIT COST	Saratoga Ave/North-South Rd from UHWO-Makai Station Section 1 Alt 5		Fort Weaver Rd to Aloha Stadium Section 2 Alt 1	
40.00 Sitework & Special Conditions			40.A		AERIAL ALIGNMENT	12,363		33,274	
			40.AG		AT GRADE ALIGNMENT	6,906		2,300	
CSC40.01-1		Demolition: Urban	1	RF	$207		$0	35,574	$7,363,818
CSC40.01-2		Demolition: Rural	1	RF	$22		$0		$0
CSC40.01-3		Demolition: Residential	1	RF	$53	6,906	$366,018		$0
CSC40.01-8		Clear and Grubbing	1	RF	$62	34,000	$2,108,000	1,600	$99,200
CSC40.01-5		Earthwork	1	RF	in guideway				
CSC40.01-6		Building Mitigation (Underpinning, etc)	1	RF	$4,672,938		$0		$0
CSC40.01-7		Building Mitigation (Parking Structure Demolition & Reconstruction)	1	SF	$532		$0		$0
	40.01	**Demo Clearing & Sitework**					**$2,474,018**	**$35,574**	**$7,463,018**
CSC40.02-1		UTILITIES BASED ON 1992 INFORMATION	1	RF	$81	19,269	$1,560,789	35,574	$2,881,494
CSC40.02-7		Utility: REMOVALS	1	RF	$54	19,269	$1,040,526	35,574	$1,920,996
CSC40.02-8		SECTION 1: ELECTRICAL & COMMUNICATION- KAMOKILA BLVD	1	LS	$11,661,300	-	$0	-	$0
CSC40.02-9		SECTION 1: ELECTRICAL & COMMUNICATION- KAPOLEI BLVD	1	LS	$10,140,835	-	$0	-	$0
CSC40.02-10		SECTION 1: ELECTRICAL & COMMUNICATION- SARATOGA BLVD	1	LS	$14,919,197	-	$0	-	$0
CSC40.02-10a		SECTION 1: ELECTRICAL & COMMUNICATION- MOS 1 SARATOGA BLVD	1	LS	$9,914,625	1	$9,914,625	-	$0
CSC40.02-11		SECTION 1: ELECTRICAL & COMMUNICATION- GEIGER/FT WEAVER BLVD	1	LS	$8,585,817	-	$0	-	$0
CSC40.02-12		SECTION 2: ELECTRICAL & COMMUNICATION- FARRINGTON BLVD	1	LS	$12,628,933	-	$0	1	$12,628,933
CSC40.02-13		SECTION 3: ELECTRICAL & COMMUNICATION- SALT LAKE/NORTH KING BLVD	1	LS	$16,069,810	-	$0	-	$0
CSC40.02-14		SECTION 3: ELECTRICAL & COMMUNICATION- SALT LAKE/DILLINGHAM BLVD	1	LS	$15,489,716	-	$0	-	$0
CSC40.02-15		SECTION 3: ELECTRICAL & COMMUNICATION- MAUKA SIDE OF AIRPORT VIADUCT	1	LS	$110,634,239	-	$0	-	$0
CSC40.02-16		SECTION 3: ELECTRICAL & COMMUNICATION- MAKAI SIDE OF AIRPORT VIADUCT ELEVATED	1	LS	$90,946,739	-	$0	-	$0
CSC40.02-17		SECTION 3: ELECTRICAL & COMMUNICATION- MAUKA SIDE OF AIRPORT VIADUCT	1	LS	$22,388,642	-	$0	-	$0
CSC40.02-18		SECTION 3: ELECTRICAL & COMMUNICATION- AOLELE ST	1	LS	$21,606,054	-	$0	-	$0
CSC40.02-19		SECTION 4: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD	1	LS	$70,953,750	-	$0	-	$0
CSC40.02-20		SECTION 4: ELECTRICAL & COMMUNICATION- KING ST	1	LS	$48,825,000	-	$0	-	$0
CSC40.02-21		SECTION 4: ELECTRICAL & COMMUNICATION- MIDDLE ST	1	LS	$299,250	-	$0	-	$0
CSC40.02-22		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/HOTEL ST/KAWAIAHAO ST/KAPIOLANI BLVD	1	LS	$133,610,175	-	$0	-	$0
CSC40.02-23		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD/HOTEL ST/KAWAIAHAO ST/KAPIOLANI	1	LS	$135,273,779	-	$0	-	$0
CSC40.02-24		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/WAIMANU ST/KAPIOLANI BLVD	1	LS	$119,605,978	-	$0	-	$0
CSC40.02-24a		SECTION 5: ELECTRICAL & COMMUNICATION- MOS 1 NORTH KING ST/WAIMANU ST/KAPIOLANI BLVD	1	LS	$9,497,964	-	$0	-	$0
CSC40.02-25		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD/HOTEL ST/WAIMANU ST/KAPIOLANI	1	LS	$121,269,582	-	$0	-	$0
CSC40.02-26		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/NIMITZ HWY/QUEEN ST/KAPIOLANI BLVD	1	LS	$120,324,175	-	$0	-	$0
CSC40.02-62		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM/NIMITZ/QUEENST/KAPIOLANI BLVD	1	LS	$121,048,364	-	$0	-	$0
CSC40.02-63		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$152,162,486	-	$0	-	$0
CSC40.02-63a		SECTION 5:MOS 2a :NORTH KING / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$33,552,021	-	$0	-	$0
CSC40.02-63a1		SECTION 5:MOS 2a :DILLINGHAM / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$34,290,694	-	$0	-	$0
CSC40.02-63b		SECTION 5: MOS 2b NORTH KING / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$52,504,197	-	$0	-	$0
CSC40.02-63b1		SECTION 5: MOS 2b Dillingham / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$53,242,870	-	$0	-	$0
CSC40.02-64		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$152,983,234	-	$0	-	$0
CSC40.02-64a		SECTION 5: MOS 3 DILLINGHAM / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$124,826,342	-	$0	-	$0
CSC40.02-65		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING / BERETANIA ST / S KING ST	1	LS	$61,198,973	-	$0	-	$0
CSC40.02-66		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM / BERETANIA ST / S KING ST	1	LS	$62,813,917	-	$0	-	$0
CSC40.02-68		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/WAIMANU ST/KAPIOLANI BLVD (short Tunnel King st)	1	LS	$164,208,791	-	$0	-	$0
CSC40.02-69		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD/HOTEL ST/WAIMANU ST/KAPIOLANI BLVD (long Tunnel King st	1	LS	$165,872,395	-	$0	-	$0
CSC40.02-67		SECTION 5: ELECTRICAL & COMMUNICATION- WAIKIKI SPUR	1	LS	$60,625,729	$0	$0	$0	$0
	40.02	UTILITIES BASED ON 1992 INFORMATION	1	RF		ok	**$12,515,940**	ok	**$17,431,423**
CSC40.03-1		Hazardous Material Mitigation: Petrochemical Contaminated Excavation	1	TON	$185.00	1,283	$237,355	17,571	$3,250,635
CSC40.03-2		Hazardous Material Mitigation: Groundwater treatment	1	GAL	$1	$0	$0	$0	$0
	40.03	Hazardous Material Mitigation: Petrochemical Contaminated Excavation					**$237,355**		**$3,250,635**
CSC40.04-1		Environmental Mitigation: Allowance for Biological and Archeological/Historical Monitoring	1	ALLOW			$750,000		$2,500,000
	40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks					**$750,000**		**$2,500,000**
		Site Development: Roads, Walkways, Landscaping							
CSC40.06-1		Street Construction Adj. to LRT - One Lane	1	RF	$295	0	$0	33,974	$10,022,330
CSC40.06-1a		Turn Pocket (100 ft)	1	RF	$204	0	$0	6,440	$1,313,760
CSC40.06-17		Intersection Modification Type 1	1	LS	$146,075	0	$0	4	$584,300
CSC40.06-18		Intersection Modification Type 2	1	LS	$110,599	0	$0	3	$331,797
CSC40.06-19		Intersection Modification Type 3	1	LS	$78,372	0	$0	4	$313,488
CSC40.06-21		Intersection Modification Type 4	1	LS	$32,482	0	$0	0	$0
CSC40.06-10		Landscaping & Urban Design: Urban	1	RF	$187		$0		$0
CSC40.06-11		Landscaping & Urban Design: Rural	1	RF	$93		$0		$0
CSC40.06-12		Landscaping & Urban Design Based on 1992 Study	1	RF	$130	19,269	$2,504,970	35,574	$4,624,620
CSC40.06-13		Hotel Street Mall Reconstruction	1	sf	$160	0	$0	0	$0
CSC40.06-14		PARK & RIDE AT GRADE	1	STALL	$4,543	2,800	$12,720,400	0	$0
CSC40.06-15		PARK & RIDE STRUCTURED	1	STALL	$24,459	0	$0	1,600	$39,134,400
CSC40.06-15A		ACCESS RAMP TO P&R STRUCTURE	1	SQFT	$440	40,000	$17,600,000	92,377	$40,645,880
CSC40.06-16		**BUS BAYS**	1	STALL	$22,714	2	$45,428	14	$317,996
		Public Art (2% of Section 20.00 Stations)	1	%	2%	$15,076,716	$301,534	$26,957,896	$539,158
	40.06	**Site Development: Roads, Walkways, Landscaping**					**$33,172,332**		**$97,827,729**
		Temporary Facilities							
	40.08	**Temporary Facilities**	**1**		**$0**				
		Total Sitework & Special Conditions	**1**	**LS**			**49,149,645**		**128,472,805**

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Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

Pricing Sheet
Sitework & Special Conditions

COST ID	FTA Code	DESCRIPTION	QTY	UNIT	UNIT COST	Salt Lake Blvd/Dillingham Blvd Section 3 Alt 2		Dillingham Blvd Section 4 Alt 3	
40.00 Sitework & Special Conditions			40.A		AERIAL ALIGNMENT	24,972		8,793	
			40.AG		AT GRADE ALIGNMENT	0		0	
CSC40.01-1		Demolition: Urban	1	RF	$207	24,972	$5,169,204	8,793	$1,820,151
CSC40.01-2		Demolition: Rural	1	RF	$22		$0		$0
CSC40.01-3		Demolition: Residential	1	RF	$53		$0		$0
CSC40.01-8		Clear and Grubbing	1	RF	$62	0	$0	0	$0
CSC40.01-5		Earthwork	1	RF	in guideway				
CSC40.01-6		Building Mitigation (Underpinning, etc)	1	RF	$4,672,938		$0		$0
CSC40.01-7		Building Mitigation (Parking Structure Demolition & Reconstruction)	1	SF	$532		$0		$0
	40.01	**Demo Clearing & Sitework**					**$5,169,204**		**$1,820,151**
CSC40.02-1		UTILITIES BASED ON 1992 INFORMATION	1	RF	$81	24,972	$2,022,732	8,793	$712,233
CSC40.02-7		Utility: REMOVALS	1	RF	$54	24,972	$1,348,488	8,793	$474,822
CSC40.02-8		SECTION 1: ELECTRICAL & COMMUNICATION- KAMOKILA BLVD	1	LS	$11,661,300	-	$0	-	$0
CSC40.02-9		SECTION 1: ELECTRICAL & COMMUNICATION- KAPOLEI BLVD	1	LS	$10,140,835	-	$0	-	$0
CSC40.02-10		SECTION 1: ELECTRICAL & COMMUNICATION- SARATOGA BLVD	1	LS	$14,919,197	-	$0	-	$0
CSC40.02-10a		SECTION 1: ELECTRICAL & COMMUNICATION- MOS 1 SARATOGA BLVD	1	LS	$9,914,625	-	$0	-	$0
CSC40.02-11		SECTION 1: ELECTRICAL & COMMUNICATION- GEIGER/FT WEAVER BLVD	1	LS	$8,585,817	-	$0	-	$0
CSC40.02-12		SECTION 2: ELECTRICAL & COMMUNICATION- FARRINGTON BLVD	1	LS	$12,628,933	-	$0	-	$0
CSC40.02-13		SECTION 3: ELECTRICAL & COMMUNICATION- SALT LAKE/NORTH KING BLVD	1	LS	$16,069,810	-	$0	-	$0
CSC40.02-14		SECTION 3: ELECTRICAL & COMMUNICATION- SALT LAKE/DILLINGHAM BLVD	1	LS	$15,489,716	1	$15,489,716	-	$0
CSC40.02-15		SECTION 3: ELECTRICAL & COMMUNICATION- MAUKA SIDE OF AIRPORT VIADUCT	1	LS	$110,634,239	-	$0	-	$0
CSC40.02-16		SECTION 3: ELECTRICAL & COMMUNICATION- MAKAI SIDE OF AIRPORT VIADUCT ELEVATED	1	LS	$90,946,739	-	$0	-	$0
CSC40.02-17		SECTION 3: ELECTRICAL & COMMUNICATION- MAUKA SIDE OF AIRPORT VIADUCT	1	LS	$22,388,642	-	$0	-	$0
CSC40.02-18		SECTION 3: ELECTRICAL & COMMUNICATION- AOLELE ST	1	LS	$21,606,054	-	$0	-	$0
CSC40.02-19		SECTION 4: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD	1	LS	$70,953,750	-	$0	1	$70,953,750
CSC40.02-20		SECTION 4: ELECTRICAL & COMMUNICATION- KING ST	1	LS	$48,825,000	-	$0	-	$0
CSC40.02-21		SECTION 4: ELECTRICAL & COMMUNICATION- MIDDLE ST	1	LS	$299,250	-	$0	-	$0
CSC40.02-22		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/HOTEL ST/KAWAIAHAO ST/KAPIOLANI BLVD	1	LS	$133,610,175	-	$0	-	$0
CSC40.02-23		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD/HOTEL ST/KAWAIAHAO ST/KAPIOLANI	1	LS	$135,273,779	-	$0	-	$0
CSC40.02-24		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/WAIMANU ST/KAPIOLANI BLVD	1	LS	$119,605,978	-	$0	-	$0
CSC40.02-24a		SECTION 5: ELECTRICAL & COMMUNICATION- MOS 1 NORTH KING ST/WAIMANU ST/KAPIOLANI BLVD	1	LS	$9,497,964	-	$0	-	$0
CSC40.02-25		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD/HOTEL ST/WAIMANU ST/KAPIOLANI	1	LS	$121,269,582	-	$0	-	$0
CSC40.02-26		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/NIMITZ HWY/QUEEN ST/KAPIOLANI BLVD	1	LS	$120,324,175	-	$0	-	$0
CSC40.02-62		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM/NIMITZ/QUEENST/KAPIOLANI BLVD	1	LS	$121,048,364	-	$0	-	$0
CSC40.02-63		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$152,162,486	-	$0	-	$0
CSC40.02-63a		SECTION 5:MOS 2a :NORTH KING / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$33,552,021	-	$0	-	$0
CSC40.02-63a1		SECTION 5:MOS 2a :DILLINGHAM / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$34,290,694	-	$0	-	$0
CSC40.02-63b		SECTION 5: MOS 2b NORTH KING / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$52,504,197	-	$0	-	$0
CSC40.02-63b1		SECTION 5: MOS 2b Dillingham / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$53,242,870	-	$0	-	$0
CSC40.02-64		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$152,983,234	-	$0	-	$0
CSC40.02-64a		SECTION 5: MOS 3 DILLINGHAM / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$124,826,342	-	$0	-	$0
CSC40.02-65		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING / BERETANIA ST / S KING ST	1	LS	$61,198,973	-	$0	-	$0
CSC40.02-66		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM / BERETANIA ST / S KING ST	1	LS	$62,813,917	-	$0	-	$0
CSC40.02-68		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/WAIMANU ST/KAPIOLANI BLVD (short Tunnel King st)	1	LS	$164,208,791	-	$0	-	$0
CSC40.02-69		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD/HOTEL ST/WAIMANU ST/KAPIOLANI BLVD (long Tunnel King st	1	LS	$165,872,395	-	$0	-	$0
CSC40.02-67		SECTION 5: ELECTRICAL & COMMUNICATION- WAIKIKI SPUR	1	LS	$60,625,729	$0	$0	$0	$0
	40.02	UTILITIES BASED ON 1992 INFORMATION	1	RF		ok	**$18,860,936**	ok	**$72,140,805**
CSC40.03-1		Hazardous Material Mitigation: Petrochemical Contaminated Excavation	1	TON	$185.00	834	$154,290	12,504	$2,313,240
CSC40.03-2		Hazardous Material Mitigation: Groundwater treatment	1	GAL	$1	$0	$0	$0	$0
	40.03	Hazardous Material Mitigation: Petrochemical Contaminated Excavation					**$154,290**		**$2,313,240**
CSC40.04-1		Environmental Mitigation: Allowance for Biological and Archeological/Historical Monitoring	1	ALLOW			$2,500,000		$2,500,000
	40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks					**$2,500,000**		**$2,500,000**
		Site Development: Roads, Walkways, Landscaping							
CSC40.06-1		Street Construction Adj. to LRT - One Lane	1	RF	$295	18,500	$5,457,500	9,702	$2,862,090
CSC40.06-1a		Turn Pocket (100 ft)	1	RF	$204	2,200	$448,800	2,690	$548,760
CSC40.06-17		Intersection Modification Type 1	1	LS	$146,075	0	$0	0	$0
CSC40.06-18		Intersection Modification Type 2	1	LS	$110,599	0	$0	8	$884,792
CSC40.06-19		Intersection Modification Type 3	1	LS	$78,372	0	$0	0	$0
CSC40.06-21		Intersection Modification Type 4	1	LS	$32,482	0	$0	0	$0
CSC40.06-10		Landscaping & Urban Design: Urban	1	RF	$187		$0		$0
CSC40.06-11		Landscaping & Urban Design: Rural	1	RF	$93		$0		$0
CSC40.06-12		Landscaping & Urban Design Based on 1992 Study	1	RF	$130	24,972	$3,246,360	8,793	$1,143,090
CSC40.06-13		Hotel Street Mall Reconstruction	1	sf	$160	0	$0	0	$0
CSC40.06-14		PARK & RIDE AT GRADE	1	STALL	$4,543	1,650	$7,495,950	0	$0
CSC40.06-15		PARK & RIDE STRUCTURED	1	STALL	$24,459	0	$0	0	$0
CSC40.06-15A		ACCESS RAMP TO P&R STRUCTURE	1	SQFT	$440	0	$0	0	$0
CSC40.06-16		**BUS BAYS**	1	STALL	$22,714	4	$90,856	6	$136,284
		Public Art (2% of Section 20.00 Stations)	1	%	2%	$11,737,180	$234,744	$17,821,770	$356,435
	40.06	**Site Development: Roads, Walkways, Landscaping**					**$16,974,210**		**$5,931,451**
		Temporary Facilities							
	40.08	**Temporary Facilities**	**1**		**$0**				
		Total Sitework & Special Conditions	**1**	**LS**			**43,658,640**		**84,705,647**

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Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

Pricing Sheet
Sitework & Special Conditions

COST ID	FTA Code	DESCRIPTION	QTY	UNIT	UNIT COST	Dillingham/Nimitz Hwy/Halekauwila St/Kapiolani Blvd to Ala Moana Sta Section 1 Alt 5	
40.00 Sitework & Special Conditions			40.A		AERIAL ALIGNMENT	14,524	
			40.AG		AT GRADE ALIGNMENT	0	
CSC40.01-1		Demolition: Urban	1	RF	$207	14,524	$3,006,468
CSC40.01-2		Demolition: Rural	1	RF	$22		$0
CSC40.01-3		Demolition: Residential	1	RF	$53		$0
CSC40.01-8		Clear and Grubbing	1	RF	$62	0	$0
CSC40.01-5		Earthwork	1	RF	in guideway		
CSC40.01-6		Building Mitigation (Underpinning, etc)	1	RF	$4,672,938		$0
CSC40.01-7		Building Mitigation (Parking Structure Demolition & Reconstruction)	1	SF	$532		$0
	40.01	**Demo Clearing & Sitework**					**$3,006,468**
CSC40.02-1		UTILITIES BASED ON 1992 INFORMATION	1	RF	$81	14,524	$1,176,444
CSC40.02-7		Utility: REMOVALS	1	RF	$54	14,524	$784,296
CSC40.02-8		SECTION 1: ELECTRICAL & COMMUNICATION- KAMOKILA BLVD	1	LS	$11,661,300	-	$0
CSC40.02-9		SECTION 1: ELECTRICAL & COMMUNICATION- KAPOLEI BLVD	1	LS	$10,140,835	-	$0
CSC40.02-10		SECTION 1: ELECTRICAL & COMMUNICATION- SARATOGA BLVD	1	LS	$14,919,197	-	$0
CSC40.02-10a		SECTION 1: ELECTRICAL & COMMUNICATION- MOS 1 SARATOGA BLVD	1	LS	$9,914,625	-	$0
CSC40.02-11		SECTION 1: ELECTRICAL & COMMUNICATION- GEIGER/FT WEAVER BLVD	1	LS	$8,585,817	-	$0
CSC40.02-12		SECTION 2: ELECTRICAL & COMMUNICATION- FARRINGTON BLVD	1	LS	$12,628,933	-	$0
CSC40.02-13		SECTION 3: ELECTRICAL & COMMUNICATION- SALT LAKE/NORTH KING BLVD	1	LS	$16,069,810	-	$0
CSC40.02-14		SECTION 3: ELECTRICAL & COMMUNICATION- SALT LAKE/DILLINGHAM BLVD	1	LS	$15,489,716	-	$0
CSC40.02-15		SECTION 3: ELECTRICAL & COMMUNICATION- MAUKA SIDE OF AIRPORT VIADUCT	1	LS	$110,634,239	-	$0
CSC40.02-16		SECTION 3: ELECTRICAL & COMMUNICATION- MAKAI SIDE OF AIRPORT VIADUCT ELEVATED	1	LS	$90,946,739	-	$0
CSC40.02-17		SECTION 3: ELECTRICAL & COMMUNICATION- MAUKA SIDE OF AIRPORT VIADUCT	1	LS	$22,388,642	-	$0
CSC40.02-18		SECTION 3: ELECTRICAL & COMMUNICATION- AOLELE ST	1	LS	$21,606,054	-	$0
CSC40.02-19		SECTION 4: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD	1	LS	$70,953,750	-	$0
CSC40.02-20		SECTION 4: ELECTRICAL & COMMUNICATION- KING ST	1	LS	$48,825,000	-	$0
CSC40.02-21		SECTION 4: ELECTRICAL & COMMUNICATION- MIDDLE ST	1	LS	$299,250	-	$0
CSC40.02-22		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/HOTEL ST/KAWAIAHAO ST/KAPIOLANI BLVD	1	LS	$133,610,175	-	$0
CSC40.02-23		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD/HOTEL ST/KAWAIAHAO ST/KAPIOLANI	1	LS	$135,273,779	-	$0
CSC40.02-24		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/WAIMANU ST/KAPIOLANI BLVD	1	LS	$119,605,978	-	$0
CSC40.02-24a		SECTION 5: ELECTRICAL & COMMUNICATION- MOS 1 NORTH KING ST/WAIMANU ST/KAPIOLANI BLVD	1	LS	$9,497,964	-	$0
CSC40.02-25		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD/HOTEL ST/WAIMANU ST/KAPIOLANI	1	LS	$121,269,582	-	$0
CSC40.02-26		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/NIMITZ HWY/QUEEN ST/KAPIOLANI BLVD	1	LS	$120,324,175	-	$0
CSC40.02-62		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM/NIMITZ/QUEENST/KAPIOLANI BLVD	1	LS	$121,048,364	-	$0
CSC40.02-63		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$152,162,486	-	$0
CSC40.02-63a		SECTION 5:MOS 2a :NORTH KING / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$33,552,021	-	$0
CSC40.02-63a1		SECTION 5:MOS 2a :DILLINGHAM / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$34,290,694	-	$0
CSC40.02-63b		SECTION 5: MOS 2b NORTH KING / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$52,504,197	-	$0
CSC40.02-63b1		SECTION 5: MOS 2b Dillingham / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$53,242,870	-	$0
CSC40.02-64		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$152,983,234	-	$0
CSC40.02-64a		SECTION 5: MOS 3 DILLINGHAM / NIMITZ / HALEKAUWILA ST / KAPIOLANI	1	LS	$124,826,342	1	$124,826,342
CSC40.02-65		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING / BERETANIA ST / S KING ST	1	LS	$61,198,973	-	$0
CSC40.02-66		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM / BERETANIA ST / S KING ST	1	LS	$62,813,917	-	$0
CSC40.02-68		SECTION 5: ELECTRICAL & COMMUNICATION- NORTH KING ST/WAIMANU ST/KAPIOLANI BLVD (short Tunnel King st)	1	LS	$164,208,791	-	$0
CSC40.02-69		SECTION 5: ELECTRICAL & COMMUNICATION- DILLINGHAM BLVD/HOTEL ST/WAIMANU ST/KAPIOLANI BLVD (long Tunnel King st	1	LS	$165,872,395	-	$0
CSC40.02-67		SECTION 5: ELECTRICAL & COMMUNICATION- WAIKIKI SPUR	1	LS	$60,625,729	$0	$0
	40.02	UTILITIES BASED ON 1992 INFORMATION	1	RF		ok	**$126,787,082**
CSC40.03-1		Hazardous Material Mitigation: Petrochemical Contaminated Excavation	1	TON	$185.00	-	$0
CSC40.03-2		Hazardous Material Mitigation: Groundwater treatment	1	GAL	$1	$0	$0
	40.03	Hazardous Material Mitigation: Petrochemical Contaminated Excavation					**$0**
CSC40.04-1		Environmental Mitigation: Allowance for Biological and Archeological/Historical Monitoring	1	ALLOW			$750,000
	40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks					**$750,000**
		Site Development: Roads, Walkways, Landscaping					
CSC40.06-1		Street Construction Adj. to LRT - One Lane	1	RF	$295	6,919	$2,041,105
CSC40.06-1a		Turn Pocket (100 ft)	1	RF	$204	3,100	$632,400
CSC40.06-17		Intersection Modification Type 1	1	LS	$146,075	0	$0
CSC40.06-18		Intersection Modification Type 2	1	LS	$110,599	0	$0
CSC40.06-19		Intersection Modification Type 3	1	LS	$78,372	1	$78,372
CSC40.06-21		Intersection Modification Type 4	1	LS	$32,482	1	$32,482
CSC40.06-10		Landscaping & Urban Design: Urban	1	RF	$187		$0
CSC40.06-11		Landscaping & Urban Design: Rural	1	RF	$93		$0
CSC40.06-12		Landscaping & Urban Design Based on 1992 Study	1	RF	$130	14,524	$1,888,120
CSC40.06-13		Hotel Street Mall Reconstruction	1	sf	$160	0	$0
CSC40.06-14		PARK & RIDE AT GRADE	1	STALL	$4,543	0	$0
CSC40.06-15		PARK & RIDE STRUCTURED	1	STALL	$24,459	0	$0
CSC40.06-15A		ACCESS RAMP TO P&R STRUCTURE	1	SQFT	$440	0	$0
CSC40.06-16		**BUS BAYS**	1	STALL	$22,714	-	$0
		Public Art (2% of Section 20.00 Stations)	1	%	2%	$36,696,688	$733,934
	40.06	**Site Development: Roads, Walkways, Landscaping**					**$5,406,413**
		Temporary Facilities					
	40.08	**Temporary Facilities**	**1**		**$0**		
		Total Sitework & Special Conditions	**1**	**LS**			**135,949,963**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis
Pricing Sheet
Systems

	DESCRIPTION	COST ID	QTY	UNIT	Saratoga Ave/North-South Rd from UHWO-Makai Station Section 1 Alt 5		Fort Weaver Rd to Aloha Stadium Section 2 Alt 1	
						30		9
50.00 Systems				ALIGNMENT	19,269		35,574	
	Train Control & Signals							
csc50.01-1	ATC, Signal System Line Stations	1	RF	$238	19,269	$4,586,022	$35,574	$8,466,612
csc50.01-2	Highway Crossing Warning Devices (Preemptive)	1	EA	$235,278	8	$1,882,224	$0	$0
50.01	**Train Control & Signals**		**RF**			**$6,468,246**		**$8,466,612**
	Guideway: At-grade semi-exclusive (allows cross-traffic) NOT USED********					**NOT USED**		**NOT USED**
	Traffic Signals and Crossing Protection							
csc50.02-1	Traffic Signal Modifications (4 directions)	1	EA	$376,047	0	$0	$13	$4,888,611
csc50.02-2	Traffic Signal Modifications (3 directions)	1	EA	$289,523	0	$0	$11	$3,184,753
50.02	**Traffic Signals and Crossing Protection**		**RF**			**$0**		**$8,073,364**
	Traction Power Supply: Substations							
csc50.03-1	Traction Power Substations (2 MW)	1	EA	$1,640,461	4	6,561,844	7	11,483,227
50.03	**Traction Power Supply: Substations**		**RF**			**$6,561,844**		**$11,483,227**
	Traction Power Distribution: Catenary and Third Rail							
csc50.04-1	Traction Power Supply - At-Grade OCS, Dual Track	1	RF	$315	6,906	$2,175,390	$2,300	$724,500
csc50.04-2	Traction Power Supply - Subway OCS, Double Track	1	RF	$216	-	$0	$1,500	$324,000
csc50.04-3	Traction Power Supply - Aerial OCS, Dual Track	1	RF	$225	12,363	$2,781,675	$33,274	$7,486,650
csc50.04-4	Traction Power Supply - Aerial OCS, Single Track	1	RF	$170	-	$0	$0	$0
50.04	**Traction Power Distribution: Catenary and Third Rail**		**RF**			**$4,957,065**		**$8,535,150**
	Communication							
csc50.05-1	Communications System - Dual Track	1	LS	$299	19,269	$5,761,431	$35,574	$10,636,626
50.05	**Communication**		-			**$5,761,431**		**$10,636,626**
	Fare Collection System and Equipment							
csc50.06-1	Fare Vending Equipment Underground Stations	1	LS	$584,612	-	$0	-	$0
csc50.06-2	Fare Vending Equipment Aerial & At Grade Stations	1	LS	$299,712	3	$899,136	5	$1,498,560
50.06	**Fare Collection System and Equipment**		**RF**			**$899,136**		**$1,498,560**
	Central Control							
csc50.07	Central Control Facility	1	LS	$8,529,933	-	$0	-	$0
50.07	**Central Control**		**RF**			**$0**		**$0**
Total Systems						**$24,647,722**		**$48,693,539**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis
Pricing Sheet
Systems

	DESCRIPTION	COST ID	QTY	UNIT	Salt Lake Blvd/Dillingham Blvd section 3		Dillingham Blvd section 4	
						11		18
50.00 Systems				ALIGNMENT	24,972		8,793	
	Train Control & Signals							
csc50.01-1	ATC, Signal System Line Stations	1	RF	$238	$24,972	$5,943,336	$8,793	$2,092,734
csc50.01-2	Highway Crossing Warning Devices (Preemptive)	1	EA	$235,278	$0	$0	$0	$0
50.01	**Train Control & Signals**		**RF**			**$5,943,336**		**$2,092,734**
	Guideway: At-grade semi-exclusive (allows cross-traffic) NOT USED********					**NOT USED**		**NOT USED**
	Traffic Signals and Crossing Protection							
csc50.02-1	Traffic Signal Modifications (4 directions)	1	EA	$376,047	$6	$2,256,282	$6	$2,256,282
csc50.02-2	Traffic Signal Modifications (3 directions)	1	EA	$289,523	$10	$2,895,230	$2	$579,046
50.02	**Traffic Signals and Crossing Protection**		**RF**			**$5,151,512**		**$2,835,328**
	Traction Power Supply: Substations							
csc50.03-1	Traction Power Substations (2 MW)	1	EA	$1,640,461	5	8,202,305	2	3,280,922
50.03	**Traction Power Supply: Substations**		**RF**			**$8,202,305**		**$3,280,922**
	Traction Power Distribution: Catenary and Third Rail							
csc50.04-1	Traction Power Supply - At-Grade OCS, Dual Track	1	RF	$315	$0	$0	$0	$0
csc50.04-2	Traction Power Supply - Subway OCS, Double Track	1	RF	$216	$0	$0	$0	$0
csc50.04-3	Traction Power Supply - Aerial OCS, Dual Track	1	RF	$225	$24,972	$5,618,700	$8,793	$1,978,425
csc50.04-4	Traction Power Supply - Aerial OCS, Single Track	1	RF	$170	$0	$0	$0	$0
50.04	**Traction Power Distribution: Catenary and Third Rail**		**RF**			**$5,618,700**		**$1,978,425**
	Communication							
csc50.05-1	Communications System - Dual Track	1	LS	$299	$24,972	$7,466,628	$8,793	$2,629,107
50.05	**Communication**		**-**			**$7,466,628**		**$2,629,107**
	Fare Collection System and Equipment							
csc50.06-1	Fare Vending Equipment Underground Stations	1	LS	$584,612	-	$0	-	$0
csc50.06-2	Fare Vending Equipment Aerial & At Grade Stations	1	LS	$299,712	2	$599,424	3	$899,136
50.06	**Fare Collection System and Equipment**		**RF**			**$599,424**		**$899,136**
	Central Control							
csc50.07	Central Control Facility	1	LS	$8,529,933	-	$0	-	$0
50.07	**Central Control**		**RF**			**$0**		**$0**
Total Systems						**$32,981,905**		**$13,715,652**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis
Pricing Sheet
Systems

			COST			Dillingham/Nimitz Hwy/Halekauwila St/Kapiolani Blvd to Ala Moana Sta		Systemwide	
		DESCRIPTION	ID	QTY	UNIT	Section 1 Alt 5		Section 6	
							37		38
50.00 Systems					ALIGNMENT	14,524		0	
		Train Control & Signals							
csc50.01-1		ATC, Signal System Line Stations	1	RF	$238	$14,524	$3,456,712	-	$0
csc50.01-2		Highway Crossing Warning Devices (Preemptive)	1	EA	$235,278	$0	$0	0	$0
	50.01	**Train Control & Signals**		**RF**			**$3,456,712**		**$0**
		Guideway: At-grade semi-exclusive (allows cross-traffic) NOT USED********					**NOT USED**		**NOT USED**
		Traffic Signals and Crossing Protection							
csc50.02-1		Traffic Signal Modifications (4 directions)	1	EA	$376,047	$13	$4,888,611	0	$0
csc50.02-2		Traffic Signal Modifications (3 directions)	1	EA	$289,523	$5	$1,447,615	0	$0
	50.02	**Traffic Signals and Crossing Protection**		**RF**			**$6,336,226**		**$0**
		Traction Power Supply: Substations							
csc50.03-1		Traction Power Substations (2 MW)	1	EA	$1,640,461	3	4,921,383	-	0
	50.03	**Traction Power Supply: Substations**		**RF**			**$4,921,383**		**$0**
		Traction Power Distribution: Catenary and Third Rail							
csc50.04-1		Traction Power Supply - At-Grade OCS, Dual Track	1	RF	$315	$0	$0	-	$0
csc50.04-2		Traction Power Supply - Subway OCS, Double Track	1	RF	$216	$0	$0	-	$0
csc50.04-3		Traction Power Supply - Aerial OCS, Dual Track	1	RF	$225	$14,524	$3,267,900	-	$0
csc50.04-4		Traction Power Supply - Aerial OCS, Single Track	1	RF	$170	$0	$0	-	$0
	50.04	**Traction Power Distribution: Catenary and Third Rail**		**RF**			**$3,267,900**		**$0**
		Communication							
csc50.05-1		Communications System - Dual Track	1	LS	$299	$14,524	$4,342,676	-	$0
	50.05	**Communication**		-			**$4,342,676**		**$0**
		Fare Collection System and Equipment							
csc50.06-1		Fare Vending Equipment Underground Stations	1	LS	$584,612	-	$0	-	$0
csc50.06-2		Fare Vending Equipment Aerial & At Grade Stations	1	LS	$299,712	6	$1,798,272	-	$0
	50.06	**Fare Collection System and Equipment**		**RF**			**$1,798,272**		**$0**
		Central Control							
csc50.07		Central Control Facility	1	LS	$8,529,933	-	$0	1	$8,529,933
	50.07	**Central Control**		**RF**			**$0**		**$8,529,933**
Total Systems							**$24,123,169**		**$8,529,933**

Honolulu High-Capacity Transit Corridor Project
Fixed Guideway Alternatives
Summary Cost Comparison of Alternative Analysis

Pricing Sheet Vehicles
Summary Cost Comparison of Alternative Analysis

Vehicles Cost Summary

COST ID	DESCRIPTION	20-mile Alignment QTY	UNIT	UNIT COST	20-mile Alignment COST
70.00 Vehicles					
CSC70.01	Articulated LRV	66	EA	$2,466,732	$162,804,312
70.01	**TOTAL**		**EA**		**$162,804,312**
CSC70.06	Non Revenue Vehicles	1	LS	$4,203,149	$4,203,149
70.06	**TOTAL**		**LS**		**$4,203,149**
CSC70.07	Spare Parts	66	EA	$246,673	$16,280,418
70.07	**TOTAL**		**EA**		**$16,280,418**
Total Vehicles					**$183,287,879**